

FY00 AUDIT SUMMARY

During FY00, Navy Crane Center audit teams completed 138 WHE program audits, in accordance with our mission as assigned by SECNAVINST 11260.2, *Navy Weight Handling Program for Shore Activities* of 10 September 1997. Our responsibilities include auditing all activity WHE programs annually or biennially as appropriate and suspending unsafe crane operations, if necessary, at any activity. FY00 completed the initial cycle of audits (including 28 first time audits) of all shore activities with identified WHE programs.

This year's audit findings and summary data indicate significant program improvement, primarily (with a few exceptions) by activities audited two or more times. Findings at activities audited for the first time continued to exhibit fundamental deficiencies and a much lower level of compliance. For those few repeat audited activities that have failed to improve, additional claimant intervention may be required. As a result of completion of the audit cycle and the first year of the FY00 implementation of the expanded Navy Crane Center training program, all activities have an increased awareness of program requirements. However, additional effort is still required to ensure completion of training requirements during FY01 and consistent program execution to attain and maintain full compliance with NAVFAC P-307.

EQUIPMENT CONDITION

In FY00, the audit teams sample inspected/load tested 590 cranes out of a total inventory of 7,462 for the activities visited. Of all cranes sampled, 37 percent were unsatisfactory. (By contrast, in FY99, 47 percent overall were unsatisfactory.) Activities audited for the first time had a failure rate much higher (53 percent) than that of activities previously audited (36 percent).

As in FY99, brake/clutch deficiencies continued to be the most prevalent unsatisfactory condition the audit teams found, accounting for 41 percent of all deficient conditions resulting in unsatisfactory cranes. Most of the brake/clutch deficiencies were due to settings out of approved specifications. Thirteen percent were due to mechanical deficiencies and inoperative brakes. Examples were brake making excessive noise, foreign material found between mechanical brake discs, excessive drift, brake would not hold load, brake not opening, shoes misaligned, inoperative brakes, hardware missing, stuck in open position.

Load test related deficiencies were the next largest category of unsatisfactory cranes. Incorrect test procedures accounted for 15 percent. Examples were test directors not following NAVFAC P-307 appendix E test procedures, mobile cranes not tested in all applicable configurations, mechanical load brakes not tested. In addition, four percent of the audit sample cranes failed the load tests. Deficiencies included hydraulic mobile crane boom with excessive side deflection, the crane would not lift load, and the load brake failed during test.

Various mechanical component deficiencies (11 percent), wire rope deficiencies (9 percent), and deficient limit switches (9 percent) were the other common significant reasons for unsatisfactory cranes.

Other deficiencies of consequence found during crane inspections included cracks in the mobile crane carrier frame, excessive hydraulic crane boom wear pad clearance, improperly rated fuse installed in control circuits, and incorrect monorail wheel flange clearance.

PROGRAM COMPLIANCE

WHE programs complied with NAVFAC P-307 standards to varying degrees. Significant common findings are listed below. Many were found at activities audited for the first time.

PROGRAM MANAGEMENT

- No tracking system for Crane Safety Advisories.
- Local WHE program instructions not developed or not compatible with new NAVFAC P-307 requirements.
- Adverse weather conditions notices not developed or not posted in operator's cab.
- No enforcement of the control/surveillance of contractor cranes.
- Lockout/tagout system deficiencies.
- Mobile crane limit switch bypass keys control instructions not posted in crane cab.
- Certifying officials, inspectors, test directors, and licensing officials not designated.

INSPECTION AND CERTIFICATION

- Brake specification sheets not completed.
- Test directors not following NAVFAC P-307, appendix E test procedures.
- Incorrect test paragraph numbers shown on load test certification form/missing test paragraphs.
- Mobile cranes not tested in all applicable configurations.
- Cranes tested with incorrect test load.
- Crane condition inspection report and maintenance inspection specification reports not filled out correctly.
- Elevated bridge crane rails not certified per NAVFACINST 11230.1.
- Incorrect NDT method used for crane hooks.
- Hook NDT personnel not qualified.
- Mechanical load brakes not tested.
- Specification data sheets not developed for specific cranes.
- Repair documents do not adequately describe the work done.

CRANE SAFETY/ACCIDENTS

- Accidents not reported to Navy Crane Center.
- Investigations not thorough.

CRANE OPERATIONS

- Category 3 crane operators lack training.
- Unlicensed crane operators.
- Operator license files lack essential documentation.
- Operator's Daily Checklists (ODCL) not filled out properly.
- Complex lifts not identified/handled as such.
- Letters of designation for operator licensing/testing not issued.

ENGINEERING

- Changes made without alteration development.
- Alterations were locally approved that should have been Navy Crane Center approved.
- Locally approved alterations not submitted to Navy Crane Center for information.
- Repair of equipment deferred without justification.

RIGGING

- Deficient gear in service.
- Inadequate rigger training.
- Unsafe rigging practices, improper use, mismatched rigging gear.
- Gear not properly tested per NAVFAC P-307.
- Gear not properly marked per NAVFAC P-307.
- Slings tested at wrong test load percentage.

DEFICIENT CONDITIONS ON CRANES INSPECTED (CATEGORIZED MOST TO LEAST)

1. Brakes/clutches out of adjustment.
2. Test procedures - not all components tested (e.g., mechanical load brakes), incorrect test load, mobile cranes not tested in all configurations required by P-307.
3. Deficiencies to brake/clutch (brakes making excessive noise, foreign material found between discs, excessive drift, brake would not hold, brake not opening, shoes misaligned, inoperative brakes, hardware missing, brake stuck in open position.)
4. Mechanical miscellaneous (monorail wheel flange clearance incorrect, gear loose and moving on shaft).
5. Wire rope (deficient/damaged wire rope, improper clips/clips incorrectly installed, not reeved properly, speltered end connection not proper).
6. Limit switches (inoperable, not tested)
7. Corrosion/miscellaneous structural (boom stiffener corroded, cracks in carrier frames, cracked outrigger pad).
8. Boom/corrosion/damage (excessive deflection, worn wear pads)
9. Loose wires/miscellaneous electrical (incorrect/oversized fuses, festoon cable bare wires)
10. Structural bolts (loose, missing)
11. Failed load test.
12. Hydraulic leaks (boom extension settlement, excessive leakage).
13. Unauthorized alterations (not documented/identified, local alt not forwarded to the Navy Crane Center).
14. Controls (hoist drift after release of control lever, controller stuck in travel position after release)
15. Mechanical bolts (loose, missing,)
16. Documentation (missing, not filled out properly, incomplete).
17. Blocks/hooks (painted hooks, hook nut not direct OEM replacement, spread latches, gouges in hook)
18. Load moment indicators (not tested, inoperable, out of calibration).
19. Gear cases (not inspected, excessive noise/wear, not aligned).
20. Sheaves (wear, noise, not lubricated, wire rope not seated properly, frozen equalizer sheave)